

EXPRESS MAIL CERTIFICATE

Date 11/11/01 Label No. 767727810US

I hereby certify that, on the date indicated above, this paper or fee was deposited with the U.S. Postal Service & that it was addressed for delivery to the Assistant Commissioner for Patents, Washington, DC 20231 by "Express Mail Post Office to Addressee" service.

PLEASE CHARGE ANY DEFICIENCY UP TO \$300.00 OR CREDIT ANY EXCESS IN THE FEES DUE WITH THIS DOCUMENT TO OUR DEPOSIT ACCOUNT NO. 04-0100

Name (Print) DBPek

Signature [Signature]

Customer No.:



07278

PATENT TRADEMARK OFFICE

Docket No.: 0342/19045-US5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Andrew Pakula; James Bowie

Serial No.: 09/904,186

Art Unit: 1642

Confirmation No.: 2874

Examiner: Unknown

Filed: July 12, 2001

For: **A SCREENING METHOD FOR IDENTIFYING LIGANDS FOR TARGET PROTEINS**

INFORMATION DISCLOSURE STATEMENT

Hon. Commissioner of
Patents and Trademarks
Washington, DC 20231

Sir:

In order to comply with 37 CFR 1.97 and 1.98, attached hereto is a copy of Form PTO-1449. Copies of the documents listed thereon are found in the

file history of the parent applications as follows:

This is a Continuation of Application Serial No. 08/978,381, filed November 25, 1997, which is a Continuation of U.S. application Serial No. 08/547,889, filed October 25, 1995, which is a Continuation-in-Part of U.S. application Serial No. 08/263,923, filed June 21, 1994, now issued patent 5,679,582, which was a Continuation-in Part of U.S. application Serial No. 08/080,829, filed June 21, 1993, now abandoned. Applicants hereby make reference to the submission of copies of these references in the prior applications or to the citation of such patents in the prior applications by the Examiner in accordance with MPEP 609.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing Form PTO-1449 next to the document. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

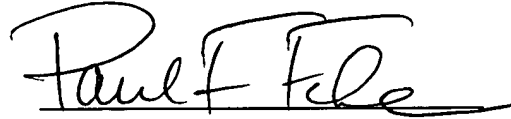
The present Information Disclosure Statement is being submitted in compliance with 37 CFR 1.56, but the citation of such document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

We are not enclosing a check in the amount of \$180.00 for the fee required in connection herewith because Applicant has not yet received a first Official Action on the merits for this application. However, should a first Official Action on the merits be mailed on or before the date of submission of this disclosure statement, the Commissioner is hereby authorized to charge any fees to deposit Account No. 04-0100.

Early and favorable consideration is earnestly solicited.

Respectfully submitted,

Dated: November 1, 2001

A handwritten signature in black ink, appearing to read "Paul F. Fehlner", with a long horizontal flourish extending to the right.

Paul F. Fehlner, Ph.D.
Registration No. 35,135
Attorney for Applicant(s)

DARBY & DARBY
805 Third Avenue
New York, NY 10022
(212) 527-7700

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

SERIAL NO: 09/904,186

APPLICANT: Andrew Pakula

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

U.S. PATENT DOCUMENTS

<u>*EXAMINER INITIALS</u>	<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>NAME</u>	<u>CLASS</u>	<u>SUBCLASS</u>	<u>FILING DATE</u>
	1. 4,589,609	1989	Dull et al.	436	501	04/30/86
	2. 5,200,504	1993	Ghadiri	530	304	10/02/90
	3. 5,506,097	1996	Potter et al.	435	4	01/10/94
	4. 5,325,295	1994	Fratantoni et al.	364	413.08	04/22/91
	5. 5,585,277	1996	Bowie et al.	436	518	03/21/95
	6. 6,020,141	2000	Pantiliano et al.	435	7.1	05/09/97

FOREIGN PATENT DOCUMENTS

<u>*EXAMINER INITIALS</u>	<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>COUNTRY</u>	<u>CLASS</u>	<u>SUBCLASS</u>	<u>TRANSLATION YES NO</u>
	7. WO 92/03542	1992	WIPO			X
	8. WO 93/14781	993	WIPO			X
	9. 0 613 007 A2	1994	EPO			X

10. Derwent Publications. Abstract No. 75-43214W, Japanese Patent No. A-49 093 093. Sep. 4, 1974.

OTHER REFERENCES**(INCLUDING AUTHOR, TITLE DATE, PERTINENT PAGES, ETC.)***EXAMINER
INITIALS

11. Tanigaki, N. et al., Human Immunology 36: 119-127 (1993) ✓

12. Grant, S.K. et al., Biochemistry 31: 9491-9501 (1992) ✓

13. Randall, L.L., Science 257: 241-245 (Jul. 1992) ✓

14. Zahnley, J.C., J. Inorganic Biochem. 15: 67-78 (1981)

15. Grimaldi, S. et al., Biochem. 21: 145-151 (1982)

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

SERIAL NO: 09/904,186

APPLICANT: Andrew Pakula

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

*EXAMINER
INITIALS

16. Pace, C.N. and McGrath, T., J. Biol. Chem. 255: 3862-3865 (1980)
17. Doyle, R.J. et al., Carbohydrate Res. 46: 111-118 (1976)
18. Casas-Finet, J.R. et al., J. Mol. Biol. 229: 873-889 (1993)
19. Merabet, E.K. et al., Biochim. Biophys. Acta 1161: 272-278 (1993)
20. Fernandez-Ballester, G. et al., Biochem J. 228: 421-426 (1992)
21. Harrington, J.P., Int. J. Biochem. 24: 275-280 (1992)
22. Green, S.M. et al., J. Biol. Chem. 266: 21474-21481
23. Feng, Y. and Sligar, S.G., Biochem. 30: 10150-10155 (1991)
24. Parsell, D.A. and Sauer, R.T., J. Biol. Chem. 264: 7590-7595 (1989)
25. Wagenhofer, M. et al., Anal. Biochem. 175: 422-432 (1988)
26. Lapadat, M.A. and Spremulli, L.L., J. Biol. Chem. 264: 5510-5514 (1989)
27. Kuwajima, K. et al., Int. J. Peptide Protein Res. 27: 18-27 (1986)
28. Rosengart, et al., Biochem. Biophys. Res. Commun. 152(1): 432-440 (4/15/88)
29. Nilsson et al., Annu. Rev. Microbiol. 45: 607-635 (1991)
30. Friguet et al., Protein Structure a Practical Approach, Creighton, Ed., IRL Press (Oxford 1989)
31. Walz, et al., Journal of Biological Chemistry. 265(13): 7127-7137 (1990) ✓
32. Pace et al., Biochemistry 27: 3242-3246 (1988) ✓
33. Airas, R. Kalervo, *Biochemistry* 33:7193 (1994)
34. Barcelo et al., *Chem. Biol. Interactions* 74:315 (1990)
35. Bouvier et al., *Science* 265:398 (1994)

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

APPLICANT: Andrew Pakula

SERIAL NO: 09/904,186

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

***EXAMINER
INITIALS**

36. Brandts et al., *American Laboratory* 22:30 (1990)
37. Brandts et al., *Biochemistry* 29:6927 (1990)
38. Chavan et al., *Biochemistry* 33:7193 (1994)
39. Davidson, et al., *Proc. Natl. Acad. Sci. USA* 91:2146-215 (1994)
40. Eftink, *Biophys. J.*, 66:482-501 (1994)
41. Eriksson et al., *Nature* 335:371 (1992)
42. Ferscht, *Curr., Opinion in Struc. Biol.* 7:3 (1997)
43. Kahn, Theodore W., *Biochemistry*, 31:8829-8839 (1992)
44. Lee, Heeyong, et al., *FEBS Letts.* 339:165-167 (1994)
45. Morton et al., *Biochemistry* 34:8513 (1995)
46. Schellman, John A., *Biopolymers* 14:999 (1975)
47. Schellman, John A., *Biophysical Chem.* 45:273 (1993)
48. Scott, et al., *Science* 249:386 (1990)
49. Wang, Zhen-Yuan, *J. Biol. Chem.* 268:20785-20790 (1993)
50. Weber, et al., *J. Am. Chem. Soc.* 16:2716 (1994)
51. Pace and Marshall, *Archives of Biochemistry and Biophysics*, 199:270-276 (1980)
52. Tsai, et al., *Pharmaceutical Research*, 10:649-569 (1993)
53. Burke et al., *Biochemistry*, 32:6419-6426 (1993)
54. Volkin et al., *Archives of Biochemistry and Biophysics*, 300:30-41 (1993)
55. Hu et al., *Biochemistry*, 31:4876-82 (1992)

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

APPLICANT: Andrew Pakula

SERIAL NO: 09/904,186

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

*EXAMINER
INITIALS

56. Copeland *et al.*, Archives of Biochemistry and Biophysics, 289:53-61 (1991)
57. Dabora, *et al.*, J. Biol. Chem., 266:23637-40 (1991)
58. Pace, TIBS 15: 14-17 (1990) ✓
59. Keating *et al.*, Biochemistry, 27:5240-5 (1988)
60. Permyakov *et al.*, Biophys. Chem., 32:37-42 (1988)
61. Allen and Wong, Arch. Biochem. Biophys., 249:137-147 (1986)
62. Busby and Ingham, Biochim. Biophys. Acta, 871:61-71 (1986) ✓
63. Pace and Creighton, J. Mol. Biol., 188:477-486 (1986)
64. Schnarr and Maurizot, Biochim. Biophys. Acta, 702:155-162 (1982)
65. Klesov and Gerasimas, Biokhimiia, 44:1084-92 (1979)
66. Oobatake *et al.*, J. Biochem., 86:65-70 (1979)
67. Blazyk and Lam, Biochemistry, 15:2843-8 (1976)
68. DeFlora *et al.*, Ital. J. Biochem., 24:147-61, (1975)
69. Takahasi, J. Biochem., 75:201-204 (1974)
70. Enna, Principals and Methods in Receptor Binding: 13-33, Plenum Publishing Corp. (1984)
71. Enna, "Biochemical Approaches for Evaluating Drug-Receptor Interactions", Drug Discovery and Development, pp. 151-176, Humana Press (1987)
72. Baldwin, Drug Discovery and Development, pp. 33-71, Humana Press (1987)
73. Kinnier, Drug Discovery and Development, Humana Press (1987)
74. Williams and Malick, pp. 3-29, Drug Discovery and Development, Humana Press (1987)

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

APPLICANT: Andrew Pakula

SERIAL NO: 09/904,186

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

***EXAMINER
INITIALS**

75. Bieth *et al.* Biochemical Medicine, 11:350-357 (1974)
76. Gething and Sambrook, Nature, 355:33-45 (1992)
77. Hardy and Randall, Science, 251:439-443 (1991)
78. Chen, et al., Anal Chem., 64:3018-3023 (1992)
79. Silverman, L. et al., Current Opinion in Chemical Biology, 397-403 (1998)
80. Broach, J.R. and Thorner, J., Nature, 384 (Supp. 7):14-16 (1996)
81. Zhang, Y. et al., Analytical Biochemistry, 264:22-25 (1998)
82. Volkin D.B. et al., Biochemistry, 33:7193-7202 (1994)
83. Volkin et al., Proceedings of the Ninth International Biotechnology Symposium and Exposition, American Chemical Society, 1992, cover pages and pages 299-302
84. Expert Report of James R. Broach on Issues of Patent Invalidity, Scriptgen Pharmaceuticals v. 3-Dimensional Pharmaceuticals, U.S. District Court, Delaware, Nov. 1, 1999
85. Opening Brief in Support of Defendant's Motion for Summary Judgment of Invalidity, Scriptgen Pharmaceuticals v. 3-Dimensional Pharmaceuticals, U.S. District Court, Delaware, Jan. 7, 2000
86. Scriptgen Pharmaceuticals, Inc.'s Answering Brief in Opposition to Defendant's Motion for Summary Judgment of Invalidity, Scriptgen Pharmaceuticals v. 3-Dimensional Pharmaceuticals, U.S. District Court, Delaware, Feb. 1, 2000
87. Defendant's Reply Brief in Support of Defendant's Motion for Summary Judgment of Invalidity, Scriptgen Pharmaceuticals v. 3-Dimensional Pharmaceuticals, U.S. District Court, Delaware, Feb. 28, 2000
88. Bowie, Identifying Determinants of Folding and Activity for a Protein of Unknown Structure, B.A., Chemistry, Carleton College (1981), Submitted to the Department of Biology in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy at the Massachusetts Institute of Technology, May 1989
89. Crothers, D.M., Draft Opinion, Scriptgen Pharmaceuticals v. 3-Dimensional Pharmaceuticals, U.S. District Court, Delaware, pp. 1-15, Oct. 20, 1999

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

SERIAL NO: 09/904,186

APPLICANT: Andrew Pakula

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

***EXAMINER
INITIALS**

90. Horwitz, R.L., *et al.*, Memorandum Opinion, Scriptgen Pharmaceuticals v. 3-Dimensional Pharmaceuticals, U.S. District Court, Delaware, Dec. 15, 1999

91. Pakula A.A., "A Genetic and Biological Analysis of the Bacteriophage λ Cro Protein", B.S., Biol.And Chem., Tufts Univ. (1980), Submitted to the Department of Biology in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy at the Massachusetts Institute of Technology, Sept. 1988

92. Pantoliano, M.W., Senior Director, Biophysical Chemistry, 3-Dimensional Pharmaceuticals, Inc., "The ThermoFlour® Strategy for High-Throughput Screening of Chemical Libraries against Therapeutic Targets Including Those Derived from Genomics", pp. 1-17

93. Alderman, E.M., Director, Pharmaceutical Research, , New Ventures, Zymark Corporation, "Abbreviating the Assay Development Process through Scaleable Automation Technology"

94. Wainer, I.W., Professor of Pharmacology, Georgetown University Medical Center, "Immobilized Receptor-Based Liquid Chromatographic Stationary Phases for Rapid On-Line Screening"

95. Little, J.N., Senior Vice President, Cetek Corporation, "A powerful New Screening Technology Utilizing Capillary Electrophoresis"

96. Yeh, Li-An, Director, Drug Discovery, NEN Life Science Products, "Development of a Novel Phospholipase C Assay in HTS: A Functional Assay for GPCR"

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.: 0342/19045US5

APPLICANT: Andrew Pakula

SERIAL NO: 09/904,186

FILING DATE: July 12, 2001

CONFIRMATION NO: 2874

***EXAMINER**
INITIALS

EXAMINER: _____

DATE CONSIDERED: _____

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.